

Penn Laird, VA Chesapeake Bay TMDL Public Meeting Summary

December 16, 2009

**Spotswood High School
368 Blazer Drive
Penn Laird, VA 22846**

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Agenda

- **Welcome, introductions, and meeting logistics – Russ Perkinson, VADCR (5 minutes)**
- **EPA presentation on the Chesapeake Bay TMDL and EPA expectations – Richard Batiuk and Bob Koroncai, EPA (40 minutes)**
- **Next steps – Al Pollock, VADEQ (15 minutes)**
- **Public comments, questions and answers – Panel moderated by Russ Perkinson (60 minutes)**
- **Adjourn**

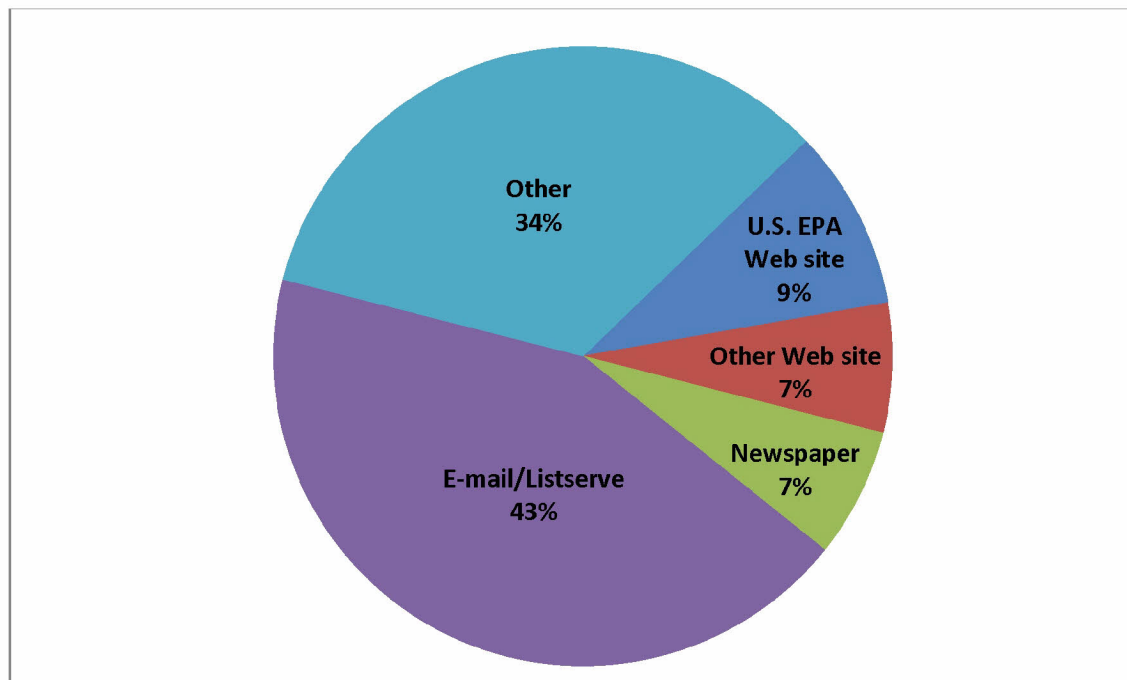
Attendee Detail

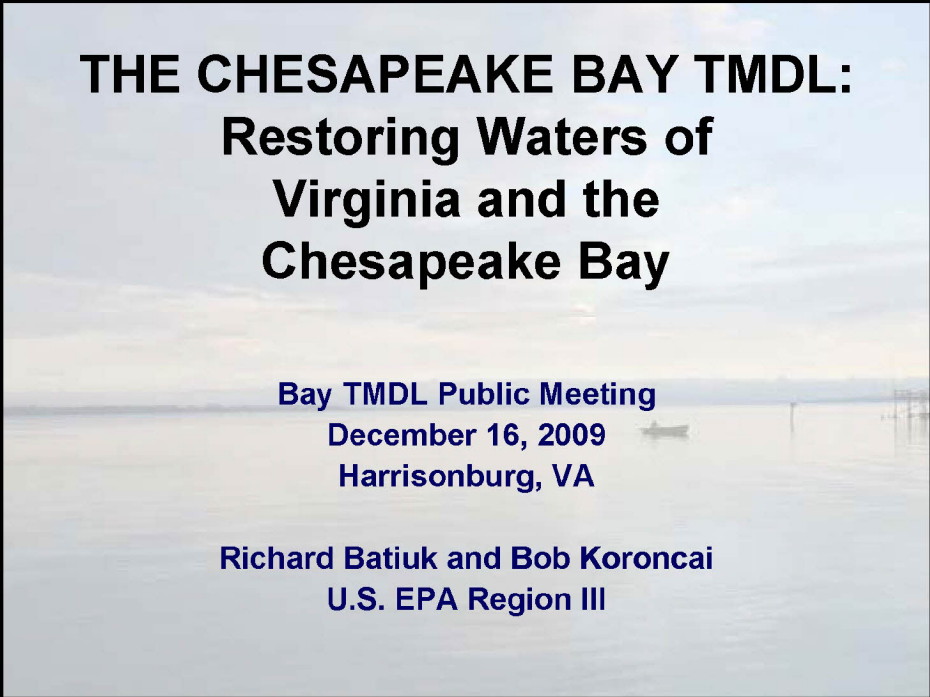
Total Live Attendees: 205

Registration Question:

How did you hear about this Meeting?

- Other (52)
 - Farm Bureau (16)
 - Word of Mouth (6)
 - Radio (4)
 - Pilgrims Pride (2)
 - Work (2)
 - DEQ (2)
 - VA SWDC
 - Rivanna Basin Community
 - VACPA
- E-mail/Listserve (39)
- Other Web Site _____ (17)
 - DEQ (3)
 - DCR (3)
 - VCN
- U. S. EPA Web Site (14)
- Newspaper (10)





THE CHESAPEAKE BAY TMDL: Restoring Waters of Virginia and the Chesapeake Bay

**Bay TMDL Public Meeting
December 16, 2009
Harrisonburg, VA**

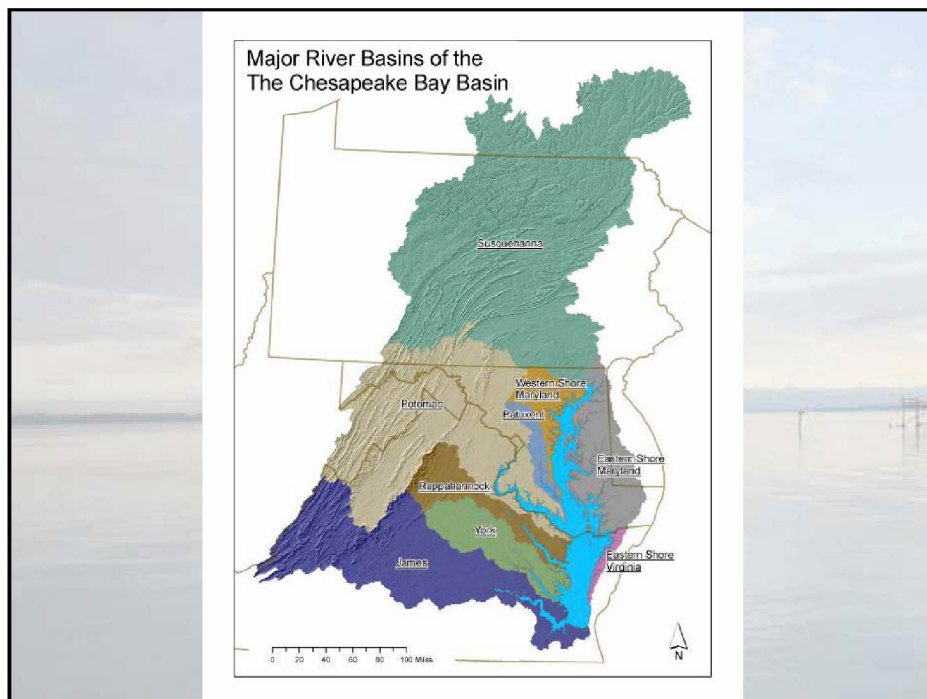
**Richard Batiuk and Bob Koroncai
U.S. EPA Region III**

AGENDA

- Welcome, introductions, and meeting logistics – Russ Perkinson, VADCR (5 minutes)
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Panel to Address Public Comments

- VA Department of Conservation and Recreation: Russ Perkinson, Moderator
- EPA: Richard Batiuk
- EPA: Bob Koroncai
- VA Department of Environmental Quality: Al Pollock



Local Water Quality Issues

Virginia's Chesapeake Bay Watershed River Basins

- About 34% of the Bay watershed is within Virginia - over 13.8 million acres

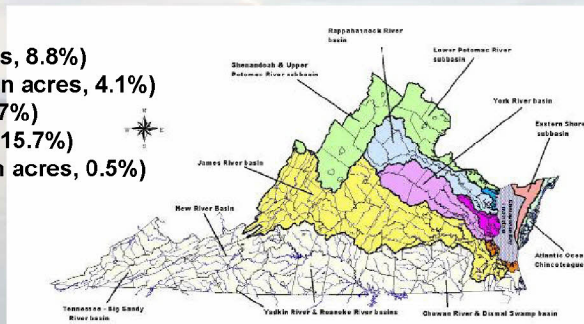
- Over 50% of Virginia drains to the Bay

- Five VA River Basins:

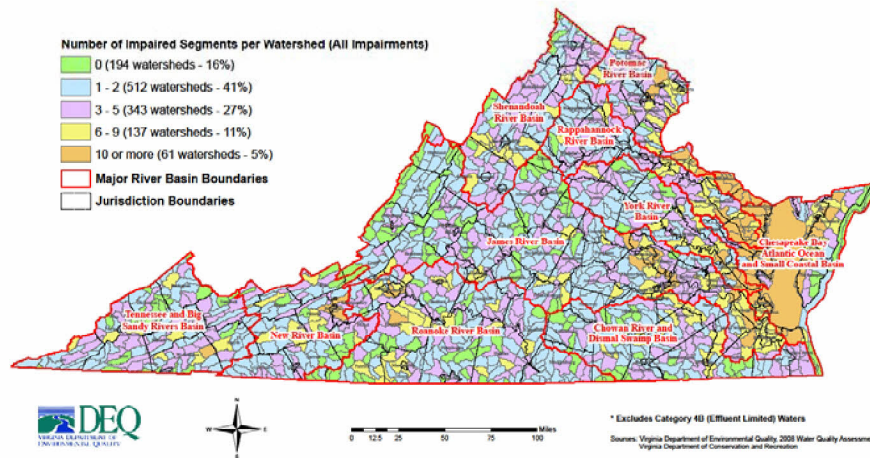
- Potomac (3.6 million acres, 8.8%)
- Rappahannock (1.7 million acres, 4.1%)
- York (1.9 million acres, 4.7%)
- James (6.4 million acres, 15.7%)
- Eastern Shore (0.2 million acres, 0.5%)

- Virginia Land Uses

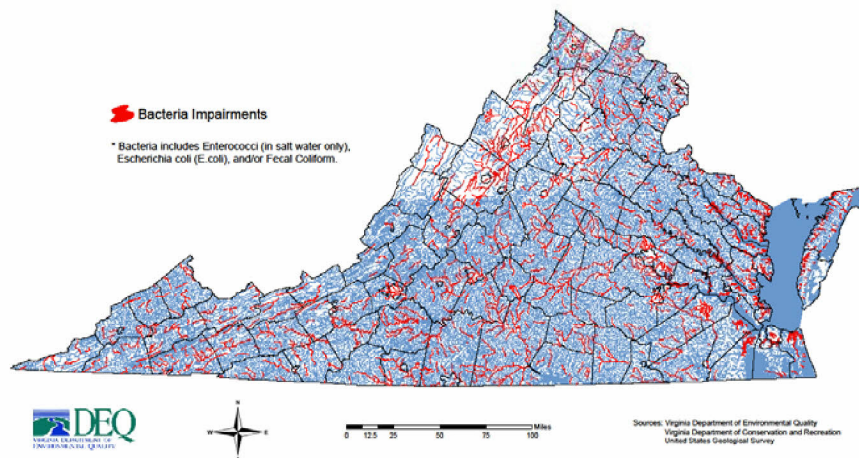
Agriculture – 22%
Urban – 12 %
Forest – 66%

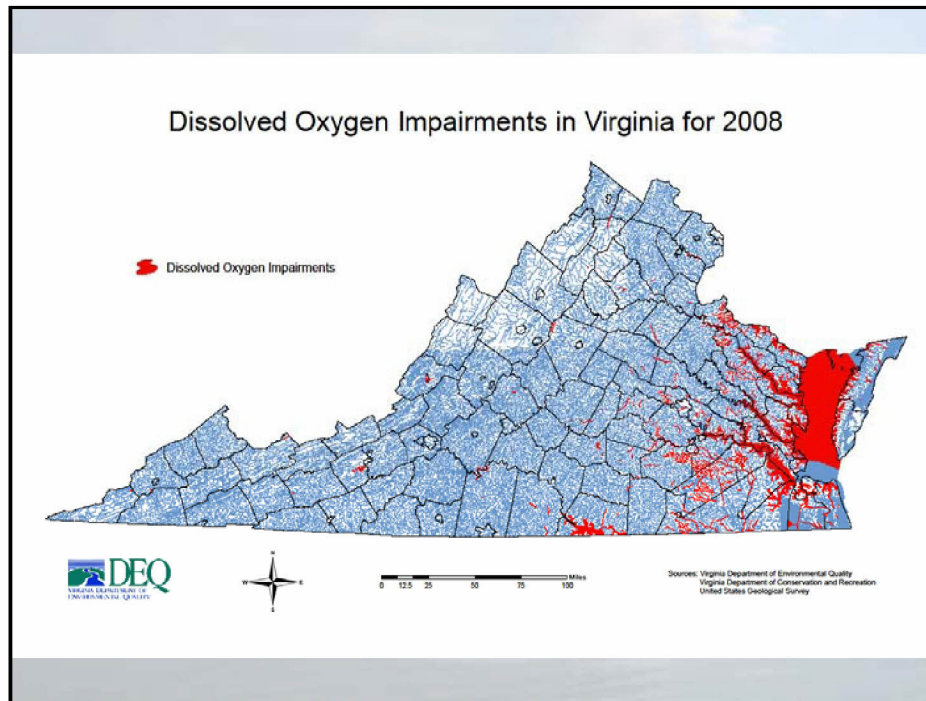


Distribution of Impaired* Waters In Virginia's Watersheds



Bacteria* Impairments in Virginia for 2008

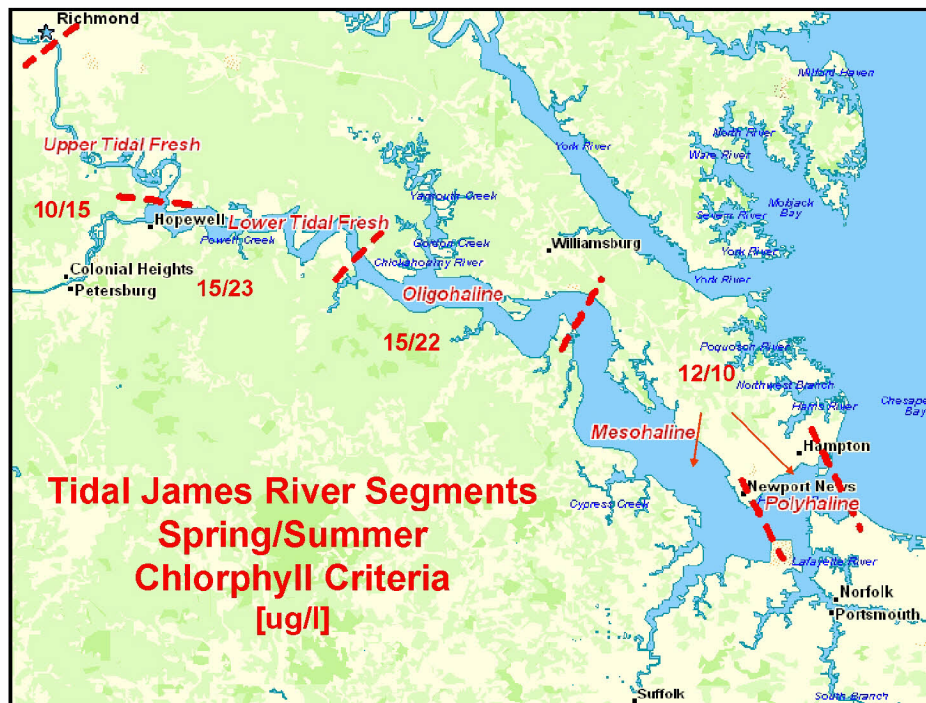




Special Case: James River

- The dissolved oxygen standards in the Bay and its tidal rivers are the basis for the working nutrient target loads being used to develop Watershed Implementation Plans in each Virginia river basin.
- However, the target loads in the James basin do not yet account for what will be needed to also meet the chlorophyll standards, which were adopted due to high algae levels in the tidal James River.





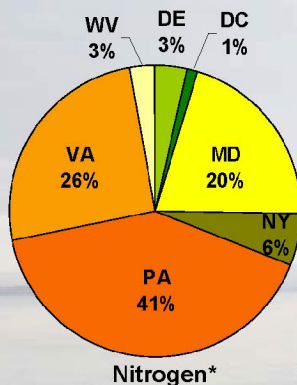
Chesapeake Bay Watershed- By the Numbers

- Largest U.S. estuary
- Six-states and DC, 64,000 square mile watershed
- 10,000 miles of shoreline (longer than entire U.S. west coast)
- Over 3,600 species of plants, fish and other animals
- Average depth: 21 feet
- \$750 million contribution annually to local economies
- Home to 17 million people (and counting)
- 77,000 principally family farms
- Declared “national treasure” by President Obama

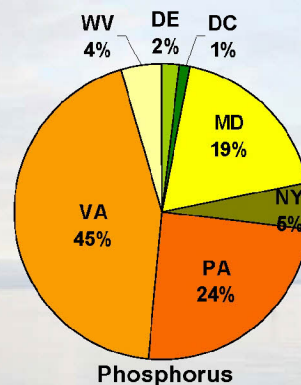


Source: www.chesapeakebay.net

Nutrient Loads by State



Nitrogen*

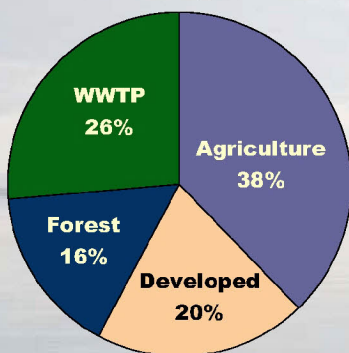


Phosphorus

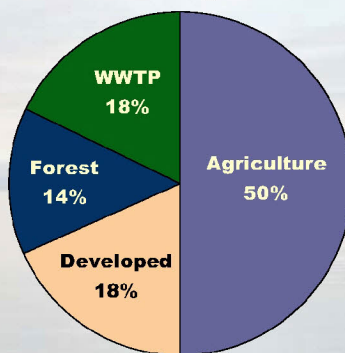
*EPA estimates a nitrogen load of 284 million lbs nitrogen in 2008. EPA assumes a reduction of 7 million lbs due to the Clean Air Act. This leaves 77 millions lbs to be addressed through the TMDL process.

Nutrient Sources of VA

Sources of Nitrogen from Virginia

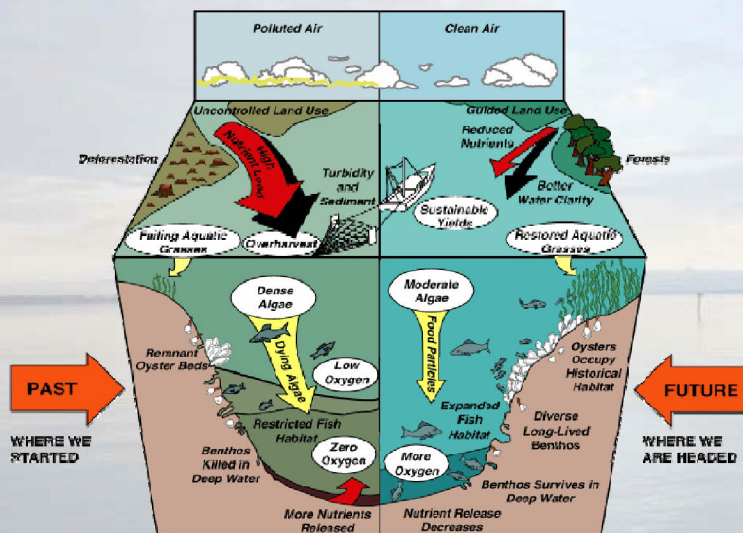


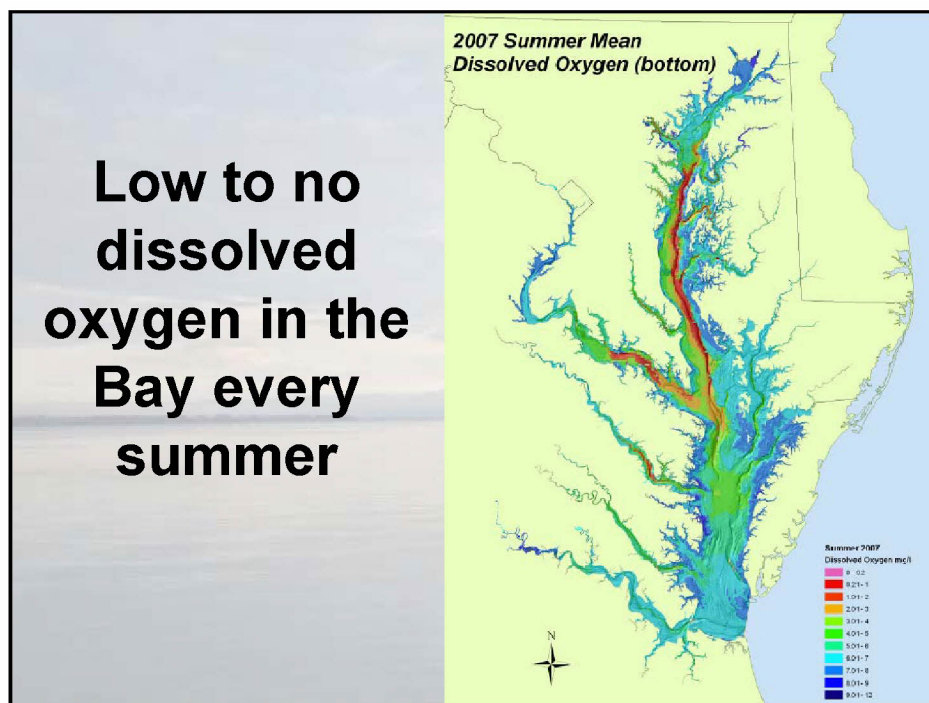
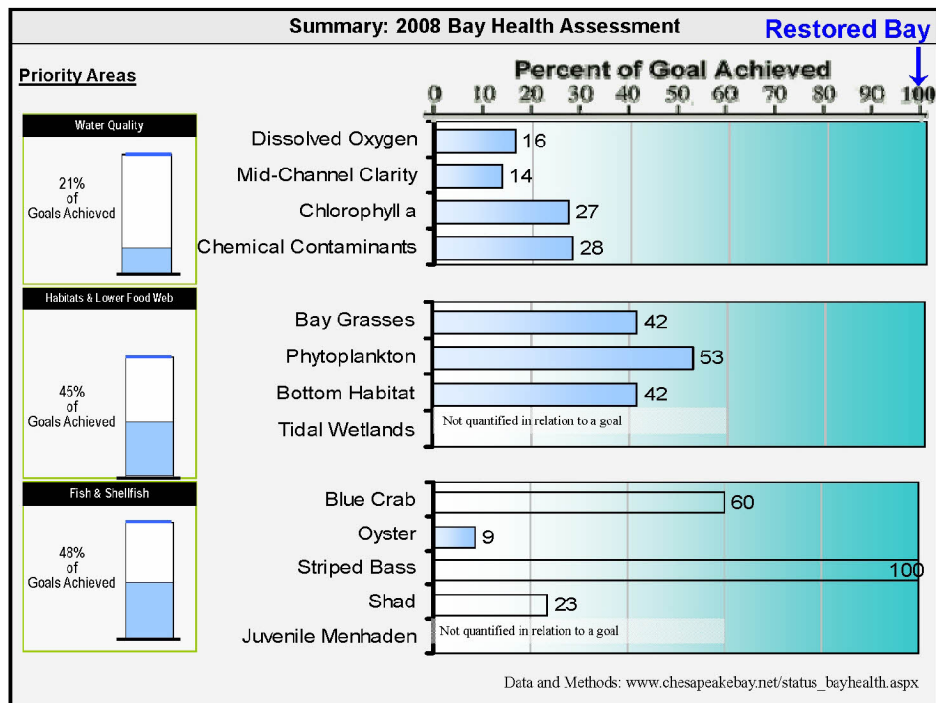
Sources of Phosphorus from Virginia



N and P values from 2008 Scenario of Phase 5.2 Watershed Model

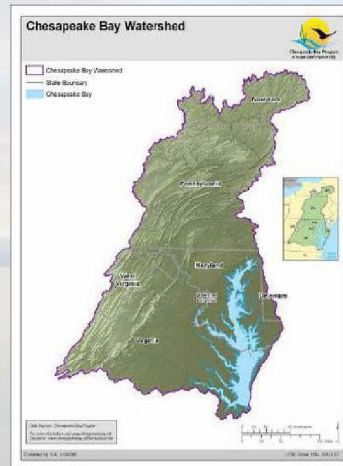
Chesapeake Bay Health- Past and Future



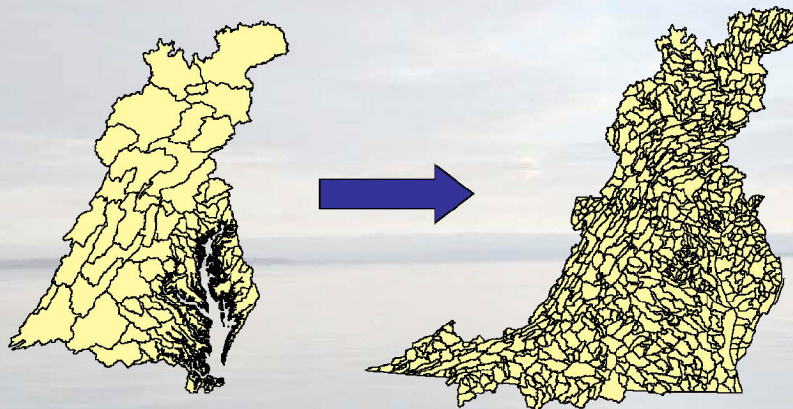


The Chesapeake Bay TMDL

- EPA sets pollution diet to meet states' Bay clean water standards
- Caps on nitrogen, phosphorus and sediment loads for all 6 Bay watershed states and DC
- States set load caps for point and non-point sources



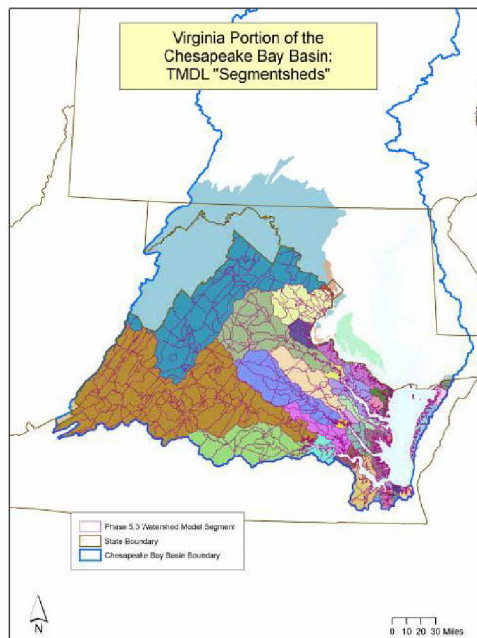
The Bay science supports local pollution diets...



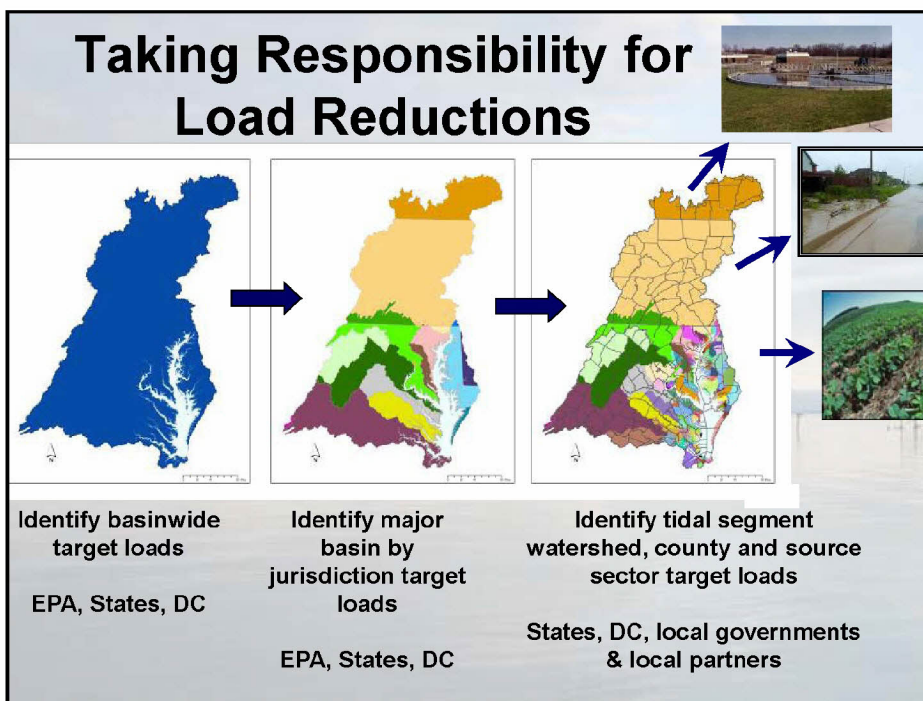
Phase 4 Bay Watershed Model
(2000-2008)

Phase 5 Bay Watershed Model
(2009-)

**...with
detailed
representation
of VA's local
watersheds**



Taking Responsibility for Load Reductions



What are the Target Pollutant Cap Loads for the Bay Watershed?

Current model estimates are that the states' Bay water quality standards can be met at basinwide loading levels of:

- 200 million pounds nitrogen per year
- 15 million pounds phosphorus per year

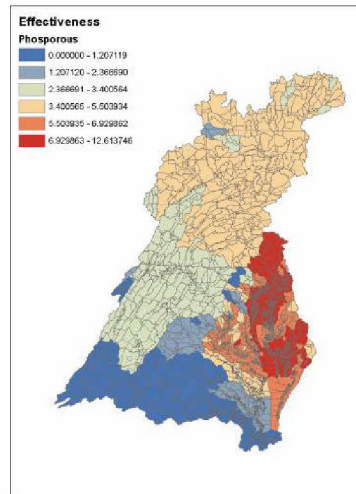
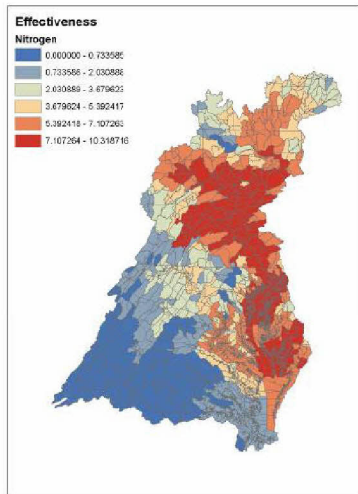
(Sediment target cap load under development-will be available by spring 2010)

Dividing the Basinwide Target Loading

Guidelines for Distributing the Basinwide Target Loads

- Water quality and living resource goals should be achieved.
- Waters that contribute the most to the problem should achieve the most reductions (on a per pound basis).
- All previous reductions in nutrient loads are credited toward achieving final cap loads.

Nutrient Impacts on Bay WQ



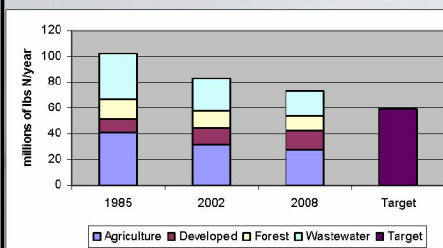
Current State Target Loads

Nitrogen			Phosphorus		
State	Tributary Strategy	Target Load	State	Tributary Strategy	Target Load
DC	2.12	2.37	DC	0.10	0.13
DE	6.43	5.25	DE	0.25	0.28
MD	42.37	41.04	MD	2.54	3.04
NY	8.68	10.54	NY	0.56	0.56
PA	73.48	73.64	PA	3.10	3.16
VA	56.75	59.21	VA	6.41	7.05
WV	5.93	5.71	WV	0.43	0.62
Total	195.75	197.76	Total	13.39	14.84

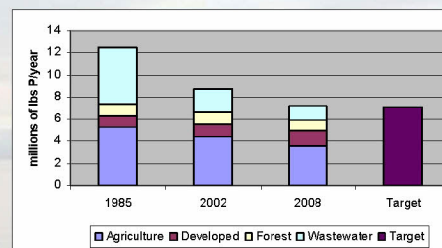
All loads are in millions of pounds per year.

Virginia's Past, Present and Future Estimated Loads

Nitrogen



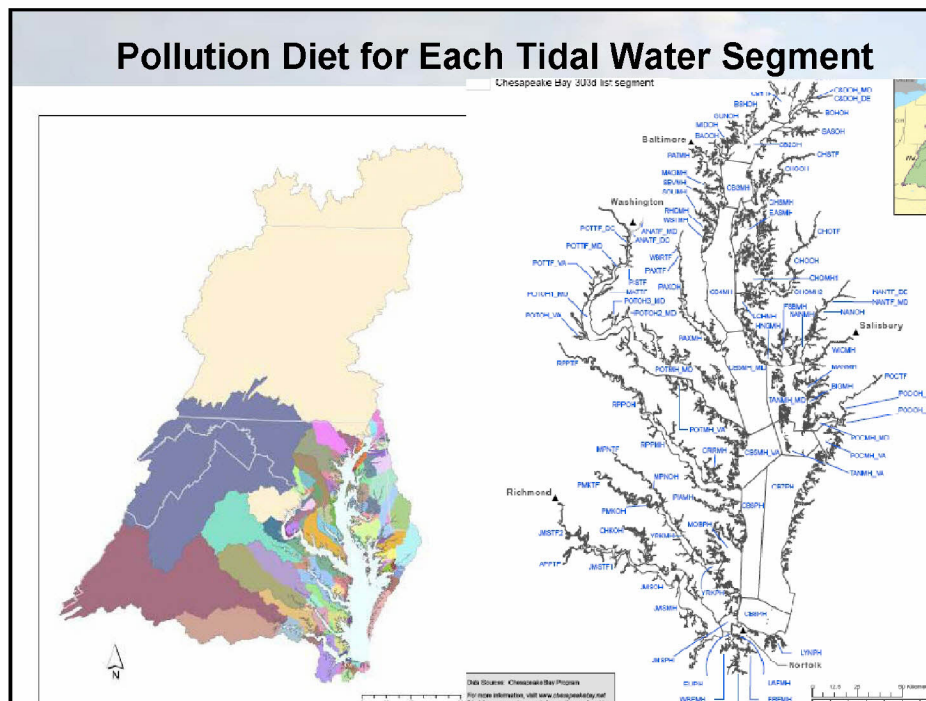
Phosphorus



All scenarios run through Phase 5.2 Watershed Model

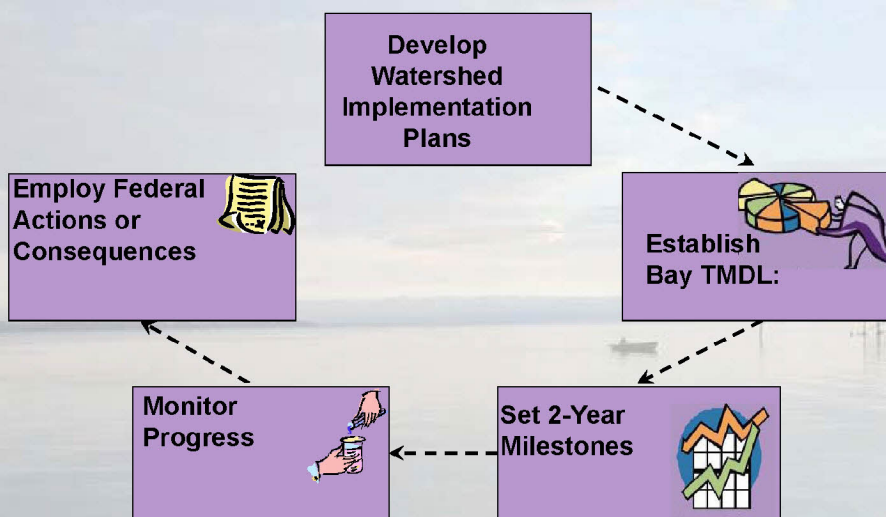
Target Load Refinements

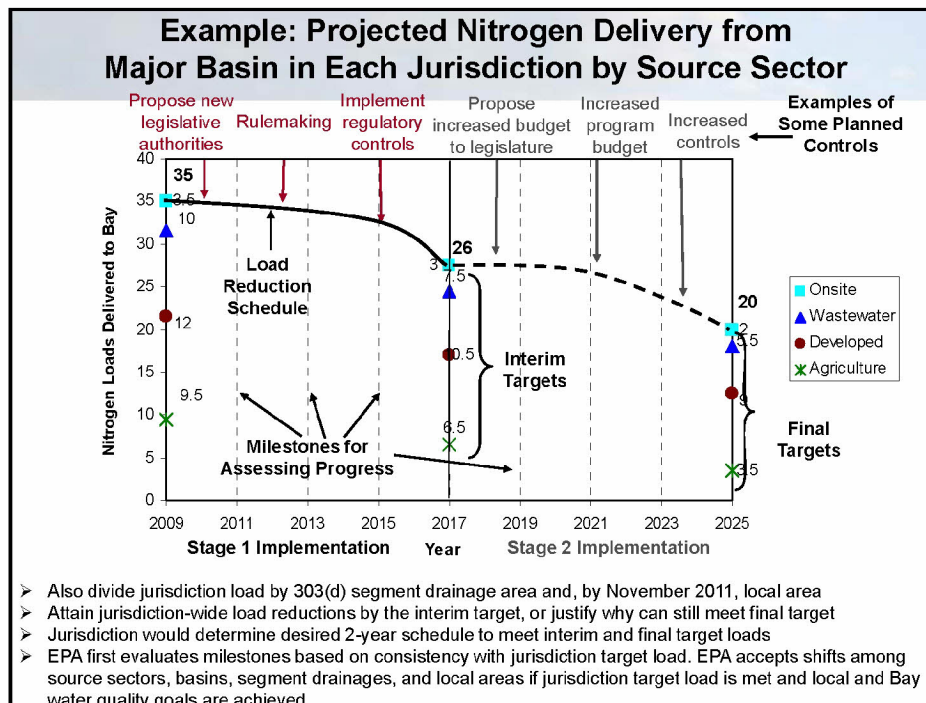
- If States' Bay Water Quality Standards can still be achieved...
 - The State may exchange nitrogen and phosphorus target loads within a basin; and/or
 - The State may exchange nitrogen and phosphorus loads from one basin to another within the State.



The Chesapeake Bay Performance and Accountability System

Mandatory Pollution Diet at Work



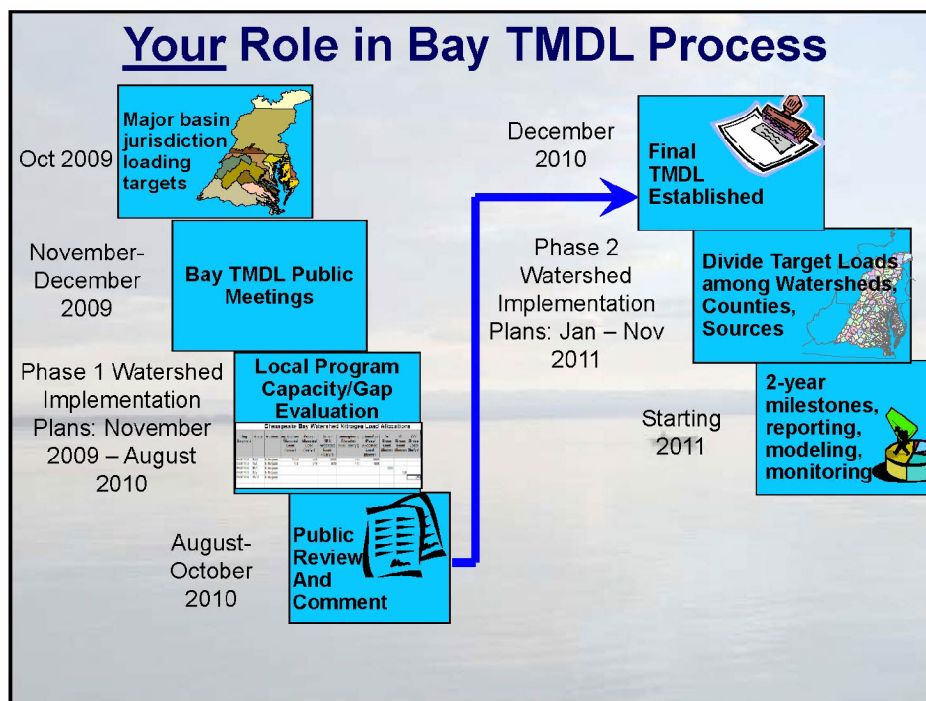


Federal Consequences

- Directed at states not achieving expectations
- Will be outlined in an EPA letter this fall. May include:
 - Assigning more stringent pollution reductions to regulated point sources (e.g., wastewater, stormwater, CAFOs)
 - Objecting to state-issued NPDES permits
 - Limiting or prohibiting new or expanded discharges (e.g., wastewater, stormwater) of nutrients and sediment
 - Withholding, conditioning or reallocating federal grant funds

Bay TMDL- Presidential Executive Order Connections

- Create Federal Leadership Committee
- Create the Performance and Accountability Framework
- Expand regulatory tools for CAFO's and urban and suburban runoff
- Improve nutrient and sediment controls on federal lands and roads
- Target farm conservation measures at high priority areas



Bay TMDL: Bottom-line

- Actions will clean and protect local waters in VA thereby supporting the local economy
- Restore a thriving Chesapeake Bay
- Federal, state, local officials and agencies will be fully accountable to the public
- Consequences for inaction, lack of progress



Further Information

- Chesapeake Bay TMDL web site
www.epa.gov/chesapeakebaytmdl
- U.S. EPA Region 3 Contacts
 - Water Protection Division
 - Bob Koroncai
– 215-814-5730; koroncai.robert@epa.gov
 - Jennifer Sincock (sincock.jennifer@epa.gov)
 - Chesapeake Bay Program Office
 - Rich Batiuk
– 410-267-5731; batiuk.richard@epa.gov
 - Katherine Antos (antos.katherine@epa.gov)





Virginia's Approach to Developing the Chesapeake Bay TMDL Watershed Implementation Plan

Department of Conservation and Recreation
Department of Environmental Quality
Secretary of Natural Resources
Commonwealth of Virginia

December 2009

A Challenged Bay

- Loss of shellfish and finfish
- Habitat loss
- Annual dead zones
- Poor water clarity



Successes to Date

- Much has been done using voluntary, incentive based, and regulatory programs
- 1985 Loads
 - 102 million pounds Nitrogen
 - 12.4 million pounds Phosphorus
- 2008 Estimated Loads
 - 72.8 million pounds Nitrogen
 - 7.2 million pounds Phosphorus



The Challenge Ahead

- To meet water quality standards in the Chesapeake Bay and its tidal rivers, **there is more to do**
- Low hanging fruit – mostly gone
- Future reductions will be harder
- We all have a role

An aerial photograph of Virginia Bay, showing the coastline and surrounding land. The bay is a large body of water with a complex shoreline. The surrounding land is green, indicating vegetation. The bay is surrounded by land on three sides, with a narrow strip of land on the right side.

What We Need to Achieve (and Maintain)

Virginia Bay Draft Initial Target Loads

- 59.2 million pounds Nitrogen
- 7.05 million pounds Phosphorus
- These targets are very likely to change

An aerial photograph of Virginia Bay, showing the coastline and surrounding land. The bay is a large body of water with a complex shoreline. The surrounding land is green, indicating vegetation. The bay is surrounded by land on three sides, with a narrow strip of land on the right side.


Load Uncertainties

- Initial draft target loads provided by EPA based on dissolved oxygen only
- Impacts on target loads from water quality standards for bay grasses, water clarity and other localized issues not yet determined
- Will be spring 2010 before target loads are adjusted for these factors



Vision for Virginia's Watershed Implementation Plan

- Focuses on “how” as well as the “how much”
- Equity between sectors
- Is relevant locally
- Uses adaptive management



Actively engage stakeholders and the public

- Virginia Bay TMDL Webinar (October 2009)
- Initial EPA Public Meetings (December 2009)
- Go to Individual stakeholder meetings (2010)
- Stakeholder Advisory Group (early 2010)
- Use Interactive web-based tools (Ongoing)
- EPA Public Comment Period (Aug. – Oct. 2010)
- Additional outreach as necessary

A Challenging Timeframe

EPA deadlines:

Phase I – Draft allocations and state strategies

- June 1, 2010 - Preliminary phase I plan by source sector and impaired segment drainage area
- August 1, 2010 – Draft phase I plan
- November 1, 2010 – Final phase I plan

Phase II – Local target loads and action plans

- June 1, 2011 – Draft phase II plan
- November 1, 2011 – Final phase II plan submitted to EPA

Phase I – Draft Allocations by Source Sector and State Strategies

- State staff to consult with sector experts, then staff will develop projected BMP coverage levels
- Draft reviewed and refined following input by Stakeholder Group
- Used to derive potential nutrient and sediment load reductions and develop State strategies



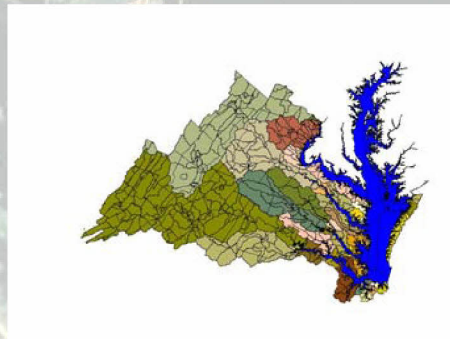
Phase I – Draft Allocations by Source Sector and State Strategies

Source Sectors

- Municipal and Industrial Wastewater
- Non-Significant Wastewater
- Municipal Combined Sewer Overflows [3 systems in VA]
- Industrial Stormwater
- Construction Stormwater
- MS4 Stormwater
- Non-MS4 Stormwater
- Confined Animal Feeding Operations (CAFOs)
- Agriculture – non CAFO
- Forest
- Atmospheric
- Onsite / septic systems

Phase I – Draft Allocations Made to Individual Watershed Segments

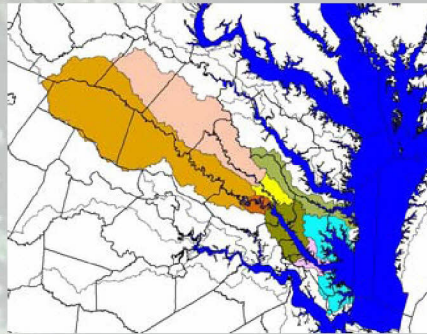
- State agency staff will distribute the allowable loads into the various impaired segments and among the various sources
- Land use data (cropland, developed land, etc.) along with BMP coverage projections and resulting load reductions will be used
- Draft reviewed and refined following input by Stakeholder Group



Virginia's 35 Bay Watershed Segments

Phase II - Local Target Loads and Action Plans

- Will work closely with local stakeholders to identify specific controls and practices to be implemented
- Agencies will initiate work later in 2010
- Due by November 2011



York River Segments and Jurisdictions

2-Year Milestone Process

- Biennial Milestones –Use adaptive management; identify specific actions needed to maintain schedule
- Continue to engage stakeholders and public
- Monitor and evaluate progress
- Next milestone period – January 1, 2012 to December 31, 2013 to be completed with phase II plan

Want to find out more?

EPA

<http://www.epa.gov/chesapeakebaytmdl/>

VA-DEQ

<http://www.deq.virginia.gov/tmdl/chesapeakebay.html>

VA-DCR

http://www.dcr.virginia.gov/soil_and_water/baytmdl.shtml



Questions & Comments



Thank you for your participation.



That concludes today's meeting.

Questions Answered

Questions Answered (in the order in which they were asked):

Note: The letter indicates the source of each question. An “A” indicates that the question was submitted by the live audience. The cards were pre-numbered to easily identify the question once they were submitted. These questions are in the order in which they were asked. Some questions were rewritten for clarity.

A82: How exactly are “all previous reductions in nutrient loads” credited towards achieving final reductions? Does this mean that existing BMPs have a credit associated with them? If so, how have BMP data been collected and where did the data come from? And is it complete/well representative data?

A45: We produce more phosphorus in our area than we can use, as you know. We are now required to extract P2O5 from our WWTP effluent, effective 2011. Are there grants or loans to help us export this to nutrient deficient areas? (John Harless, Shenandoah Environmental Services, LLC)

A106: Please describe the science indicated how nitrogen, phosphorus, and sediment from farmland in the Shenandoah Valley find its way to the Bay? How did you come up with 40% of nitrogen load and 50% of phosphorus load comes from agriculture?

A79: Are the areas where the most nitrogen is being put into the Bay from the heavily populated areas and not where the most agriculture is being done, mostly homeowners? (Wayne Tatum, Madison County)

A134: How will progress be measured/evaluated at the end of the two-year milestones? Will it be based on in-stream monitoring (stations) or on reported new BMPs and modeling? (Thanh Dang, City of Harrisonburg)

A80: Financing is critical for monitoring and maintenance to ensure that urban stormwater BMPs are working. Local staff will have to monitor to ensure BMPs continue to function as designed. How do U.S. EPA and Virginia propose to finance or help finance long-term monitoring and maintenance programs? (Thanh Dang, City of Harrisonburg)

A65: What are the plans to control nutrients from Pennsylvania?

A92: Is EPA/DEQ working on new water quality standards for nitrogen and phosphorus? If so, what will be the schedule for adoption? Will new standards be used in developing watershed implementation plans for Bay TMDLs?

A67: When will compliance begin and when will full compliance be expected?

A23: Will air pollution reductions by municipalities and education of citizens be encouraged/measured/credited? For example, energy reduction measures, etc. Deposition of air pollutants is mentioned often when talking about water quality. Much of it comes from the Tennessee Valley (coal-fired plants) and a lot of energy demand comes from “us”. (Thanh Dang, City of Harrisonburg)

A70: What safeguards are being put in place to protect farming from unfunded mandates such as streamline fencing? Are funds going to be guaranteed to help farmers comply?

A144: If farmers are required to fence out cattle, can there be a repeal of taxes for all unused land from that time on?

A60: Are there any plans to lower the threshold for CAFOs (i.e. reduce the number of animal units that qualify an operation as a CAFO)?

A120: When the annual cap is finalized ("next spring") how long will it remain constant? Will it keep changing and therefore changing the goals?

A19: How can farmers be given credit for voluntary programs they have implemented on their farms without cost share programs or formal farm plans?

A57: It's a proven fact that urban home owners and lawn services apply fertilizers and chemicals at egregiously higher pounds (tons) per acre than rural agriculture. Why are you not addressing the greater problem instead of trying to break the back of the family farmers who have been stewards of the land for generations?

A69: While wastewater treatment plants and development only accounts for slightly more pollution contribution how were the annual models and pollutant loads from farming calculated?

A12: Where is all the documentation coming from that states farmers are not doing above and beyond what they should be doing? (Jim Lemke)

A14: Could population be our problem, not the American farmer?

A13: Why is this process being accelerated at such a pace, without even taking into consideration how much voluntary efforts are being made by all farmers such as grass waterways, grass strips along waterways and the practice of no till cropping that is continuously increasing every year but is not taken into account or given credit for? (Wayne Tatum, Madison County)

A33: If EPA intends to require the geographic areas which contribute the most nitrogen and phosphorus to reduce the most, are the greatest contributors of nitrogen and phosphorus also going to be targeted for the biggest reductions? I.e. agriculture contributes the greatest amount of nitrogen and phosphorus so is agriculture going to be required to reduce the most? If so, what would be required?

Questions Submitted

Questions Submitted (but not answered):

A35: Why is the process being accelerated when the court order allowed for an extra year?

A54: It was determined years ago that homeowners, lawns, etc. provide more chemical runoff than farmers. How will EPA monitor and enforce the new regulations in a fair way and in a manner that does not over burden farmers?

A22: If an industrial facility with a NPDES/stormwater permit from DEQ has polluted stormwater entering into a locality's MS4 system, how will or how should that be addressed? Who is responsible for reducing that pollutant load? (Thanh Dang, City of Harrisonburg)

A26: Why are we expected to meet a two year milestone in 2011 when most of the time will be spent developing the TMDL and implementation plan?

A108: How do you accurately measure the nitrogen and phosphorus going into the Bay and how accurate is this method?

A133: Everyone is worried about how much it's going to cost to clean up the Bay. Has the cost of not cleaning up the Bay been calculated? How much is it going to cost if our groundwater becomes polluted? How much revenue is lost per fish kill due to insufficient oxygen? How much revenue has been lost due to the oyster and crab population crash? The Bay provides numerous natural resource services, how much revenue do they represent? It is time to protect our environment! What price could be put on cleaning up the Bay and the pride the six states would feel at accomplishing the goals together? What tourist dollars could be gained from people travelling to see and experience a healthy, vibrant Chesapeake Bay, not to mention cleaner healthier headwater areas like the Shenandoah Watershed?

A132: Why are the federal consequences aimed only at point sources when there are other sources of nutrients to the Chesapeake Bay?

A32: How much cost is enough? How many businesses must go out of business because they can't afford to meet these standards? (David Beahm)

A34: One river you didn't mention was the Elizabeth River. I know the military dumped everything during the sixties in that river from Portsmouth MS4 on up to Sewells Point. What is being done there?

A100: The government is pushing ethanol as a renewable fuel source. Corn production results in more runoff than just about any other crop. Why not ban corn production destined for ethanol production in the Bay watershed allowing farmers to produce corn for a feed or food only.

A38: Why is the farmer the one that everyone is going after when streets and household fertilizers are a big cause?

A24: There needs to be a standardized method/mechanism to collect urban BMP data (type, size, quantities, etc.) on a statewide basis for comparison, monitoring, crediting, tracking, etc. This would also help with the state TMDL implementation programs. (Thanh Dang, City of Harrisonburg)

A7: Has there been any research to address the potential of loss of industry in the Chesapeake Bay watershed due to these new regulations? (Jerry P. Turner)

A8: Given the fact that the research on global warming is not true, how can we trust that the research done in the Chesapeake Bay and tributaries is based on unbiased research? (Jerry P. Turner)

A31: Whose science is correct? Information now from EPA is different from what Virginia Governor just signed. Is this correct or tomorrow's or yesterday's, local, state or federal? Doing something wrong can be just as devastating as doing nothing. (Davis Beahm)

A133: Why isn't air deposition included as a source of pollution to the Chesapeake Bay?

A44: Our WWTP food grade sludge is highly regulated by the VPA for land application in Virginia (as fertilizer). We understand food waste in Maryland is not really regulated. This is surprising. Could you explain? (John Harless, Miller Coors Brewing)

A51: What is the impact on development of traditional drain fields after implementation of the TMDLs? Will it reduce or change the ability to construct traditional water treatment systems (septic tank and drain fields)? How will you control population growth?

A29: If you regulate the farmer, why don't you regulate every home owner also? I can put fertilizer once every 2-years but the homeowner can have chemicals put on their lawns 2-to 5 times a year and wash directly into the local creeks and water systems. Are you going to regulate everyone?

A81: I have come to understand that an expectation of the Chesapeake Bay TMDL urban source pollution reduction is going to require substantial stormwater BMP retrofits. For example, dry ponds to extended detention basins or wetlands. However, access to most areas that would be served by a retrofit is not publically owned, but rather on private property. What tools, or mandates will U.S. EPA or Virginia establish to accomplish BMP retrofits? (Thanh Dang, City of Harrisonburg)

A48: In the past, programs have been very much a one plan fits all even though there are different terrain, different crops, and different practices. What will be done to make it a practical program for Rockingham, Clarke, King George, and Goochland County farmers? It needs to be usable and practical for each farm without being overly burdensome.

A58: In your TMDL model, have you included agricultural contributions that are voluntary and BMPs that haven't been funded? Is it true that the Bay was dredged excessively in the early 1900's and then diseases almost wiped out the oysters?

A61: Where is all the money coming from to regulate all the new regulations?

A83: What BMPs have been/are included in the models and given credit? Have the following been included: Urban – local street sweeping, vacuuming debris/pollutants from storm sewer systems, public education, illicit discharge elimination (MS4 program)? Will these types of actions be creditable? (Thanh Dang, City of Harrisonburg)

A95: Do you plan to offer grants to help up implement these changes? Who would receive the grant money? Who can apply for them?

A88a: Your sources of nutrients (38% nitrogen and 50% phosphorus) in the Chesapeake from Virginia contributed to agriculture differs from numbers published by other organizations. How are those number derived and why do they differ? (Kevin K. Craun)

A88b: How does overfishing contribute to the decline of aquatic life in the Chesapeake Bay? (Kevin K. Craun)

A103: Under the Tributary Strategy Initiative, load allocations were established effective January 1, 2011 for each major watershed. Lots of effort/work went in to establishing allocations. How will these allocations be changed when January 1, 2011 is not even here?

A105: How do you plan on regulating home owners in suburban areas on their nutrient output? (Adam Bowman)

A62: Does the EPA consider domestic food production a beneficial use of our natural resources?

Comments

The comments below have been paraphrased and are not a full transcription.

J.B. Reeves, Member of Friends of the Shenandoah River Head Quarters, Winchester, Virginia

HELP! Volunteer, watershed groups (friends of) are often too strained during the current recession. Many friends groups, especially Friends of the Shenandoah River, have met good QC standards for water sampling, testing and reporting to public/users, but many need a life line to sustain efforts. The Chesapeake Bay Program could leverage government money by 5-15 times via reasonable funds to approved volunteer groups to sustain/enhance critical water quality monitoring. Such targeted funding will be essential to track all initiatives toward the 2025 and each 2-year milestone goals.

A74: How is innovation going to be encouraged? Copy “best practices” used to stimulate innovation/experimenting. Try offering some significant cash prizes and recognition. Detail desired goal/achievement and how results must be measured:

- Riparian buffers – results per variable (width/angles/etc.)
- Nitrogen and phosphorus reductions achieved via AQUA-culture systems/idea for oysters, clams, mussels, etc. (VIMS studies, etc.)
- Nitrogen and phosphorus credit trading and its verifications
- Also results from cutting edge ideas like algae culturing, genetically modified bacteria make isobutanol or bio-fuels
- Combine initiatives to treat nitrogen and phosphorus wastes with idea to change waste carbon sources into biochar/pyrolysis products and sequestering of actual/potential CO2 into soil enhancement
- Whole range of academic studies needs encouragement

Hobey Bauhan, Virginia Poultry Federation

Thanks to all of the farmers for coming tonight. It reflects the concern in the agricultural community for what is going on. Farmers care about water quality and the Chesapeake Bay and most are doing the right thing and implementing BMPs. Farmers operate on thin margins. We are in the middle of an economic downturn but there is a court-ordered process that is impacting our timelines. We are taking a flexible process and turning it on its head with a top-down, regulatory process that will affect the bottom line. This could put farmers out of business. We work with a variety of partners based on good science and economic sense. Farmers are worried about what this means to them and how it will impact their ability to farm.

Kurt Christiansen, Tree farmer from Culpepper County, Virginia

Who in the audience approves giving the feds the ability to regulate water on your private land? Folks here in the audience are land owners and it is important to note that the panel chooses not to answer the question of how much land do they own and where is it owned. Farmers have been participating in a voluntary BMP program with the Department of Forestry and this system is a win-win. There do not need to be more regulations issued from federal bureaucrats.

Last week EPA said that they plan to regulate carbon dioxide. This means the gases produced by your cattle, horses, poultry and other livestock.

EPA regulation will cause us to need permits for customary practices that include burns, tree planting, timber harvesting and many other things. I am land rich and cash poor. When times are good, developers wish to buy and develop my land. With new regulations, folks like me will be forced into an unprofitable situation. This could push me to a tipping point that forces folks like me to sell my land and it will be made into impervious surface.

Patrick Felling, Potomac Conservancy

The Potomac Conservancy works to protect the Potomac River and its tributaries such as the Shenandoah River. For the last 40 years, the nation has tried to find the right balance between society and clean water. I think that we've seen more success recently, especially with agricultural BMPs being applied and wastewater treatment. Success is not being seen with urban and suburban runoff. These are the fastest growing sources of pollution. Virginia recently passed regulations to bring this under control and I hope this will help meet the targets. It is time for Virginia and other states to learn what the goal is that needs to be met and stop degrading the waterways. I support EPA's collaborative efforts with the state, industry, communities to set the goal and strive to reach it.

Robert Strickler

The food industry is very complicated. It is a complex organization. I don't know about consequences, but I am concerned about the future of our food supply. Everything we do has a cost. Plans that you hear tonight have a cost and in my opinion, they could be in the billions. Washington, DC spends trillions. Someone has to pay for this stuff. I haven't heard who will pay and what will be the cost. We work local and think global. I worry that we will violate state's rights. We have a national agenda to feed our country at the least cost. We may drive up the cost of food by 20% and the US consumer will suffer. We produce food for the world at the least cost for the world. I am concerned that they are running the program very quickly.

Robert Canova, Roanoke (comment also submitted)

Mr. Pollock summarized what Virginia is spending to reduce \$1.2B in capital costs and the water quality improvement program supports this. There is significant effort on the part of the Virginia and its citizens to address nutrients from wastewater treatment. There is also significant effort from the agricultural community with no till farming and other BMPs. The Farm Bill includes money for the agricultural community to implement BMPs. There are few incentives to encourage the agricultural community to request and use these funds. In previous farm bills, there was a cooperation program to encourage local and regional partnerships to assist the agricultural community to address nonpoint source runoff limitations. To achieve restoration, all sectors need to participate and an opportunity to enable the agricultural and municipal community to meet further reductions is to encourage wastewater treatment and agricultural communities to partner.

Kyle Leonard, Dairy Farmer in Augusta County, Virginia

I was reading an article recently that described how Michigan had lowered phosphate levels in the watershed by curtailing turf grass fertilization. The story stuck with me. A good friend of mine in central Virginia is in the turf grass business. I have never once heard him discuss rules and regulations that he needs to follow. His business is very lucrative. I don't feel like there is a level playing field with this industry. Within the past 25 years, agriculture has reduced its nutrient loads into the bay. Homeowners continue to abuse nutrient loads over the past 25 years. I think that more progress can be made by addressing that in the short term instead of curtailing agriculture.

Mac Williams, Beef and poultry farmer in Augusta County, Virginia

I question the science that says that nitrogen and phosphorus is getting into our waters. We use nitrogen and phosphorus and therefore we are viewed as the problem. The problem is urbanization. The current administration preaches green industries and we are the first and best green industry. All efforts should be focused on Northern Virginia and the urbanization. Leave the farmers alone. We made the Chesapeake Bay the national treasure that it is.

Comments below were submitted by:

1. Robert F. Canova, PE, AAEE, Water Supply and Wastewater Certified
2. Bob Threewitts

PRESENTATION TO USEPA PUBLIC MEETING
Commonwealth of Virginia Activities to Reduce Nutrient Discharge to Chesapeake Bay
Harrisonburg, Virginia
December 16, 2009

Robert F. Canova, PE, AAEE
Water Supply and Wastewater Certified
Roanoke, Virginia

Regional Cooperation

The Commonwealth of Virginia is committed to restoration of the Chesapeake Bay. Virginia, along with Pennsylvania, Maryland, Washington, D.C., the Chesapeake Bay Commission, and the U.S. Environmental Protection Agency, was a founding partner in the Chesapeake Bay Agreement of 1983 to affect and direct restoration of the Chesapeake Bay. In 1987 Virginia committed to quantified water quality goals, including at least a 40 percent reduction of nitrogen and phosphorus entering the main stem of the Bay by 2000, and scheduled periodic re-assessment of the strategies, technologies and enforcement requirements. Virginia is also a stakeholder in the Chesapeake 2000 Agreement, which details nearly one hundred commitments important to Chesapeake Bay restoration.

Commonwealth of Virginia Activities

Chesapeake Bay restoration efforts by the Commonwealth of Virginia, specifically efforts to reduce nitrogen and phosphorus discharge to the Bay tributaries, have been significant during the past ten years. The Virginia Department of Environmental Quality has capped current and future nitrogen and phosphorus discharges to Chesapeake Bay tributaries from wastewater treatment plants. An estimated \$1.2 billion in wastewater treatment plant upgrade and expansion construction is currently underway within the Chesapeake Bay watershed of Virginia. Through the Water Quality Improvement Fund Program, the Commonwealth of Virginia has committed \$614 million in cost-share for nutrient reduction technology upgrades at 49 treatment plants. Additionally, there are another 10 wastewater treatment plant upgrade projects ready to proceed to final design and construction, at an additional \$160 million in construction cost and \$80 million in Water Quality Improvement Fund cost-share. Additional upgrade projects will be implemented as needed to maintain the nutrient waste load allocation caps; therefore, these amounts will increase further in the future.

Within 50 miles of this Public Meeting site in Harrisonburg, there are at least 7 wastewater treatment plant upgrades currently under construction. These projects have a total cost of \$262 million and are being partially funded by \$77 million in Water Quality Improvement Fund cost-share. These 7 projects are scheduled for construction completion and operational start-up between January 2010 and May 2011.

Within the agricultural sector, Soil and Water Conservation Districts throughout Virginia are working with agricultural producers to implement conservation practices on their land; in Chesapeake Bay Preservation Areas, implementation of these practices is mandatory. Cost share and other programs are being utilized to encourage conservation practices in other areas. Agriculture has introduced no-till methods and other methods to preserve the soil, reducing both sediment and phosphorus loads to Virginia rivers. Additionally, the agriculture sector is making great strides to reduce fertilizer and pesticide usage to match crop nutrient uptake, thereby reducing

nutrient runoff. Additional funding and resources are needed to continue to address nutrient runoff from point source, non-point source, and agricultural sources. However, each of these sectors has made substantial progress, at significant cost, to address nutrient pollution sources.

Nutrient Sources

The following table of total annual nitrogen and total annual phosphorus sources (average annual load for a 10-year hydrologic period), from the current Chesapeake Bay model, using 2008 land use and point source conditions. Note that wastewater treatment plant point source discharges represent 26% of Virginia's nitrogen contribution and 18% of Virginia's phosphorus contribution to the total nutrient load. Whereas, agricultural runoff represents 38% of Virginia's nitrogen contribution and 50% of Virginia's phosphorus contribution to the total nutrient load.

Chesapeake Bay Watershed Nutrient Sources

Source	Nitrogen			Phosphorus		
	Entire Basin	VA Contribution		Entire Basin	VA Contribution	
	Tons/Year	Tons/Year	%	Tons/Year	Tons/Year	%
Agriculture	130,752,481	27,611,918	38	7,768,671	3,590,764	50
Urban Runoff	44,340,094	11,658,146	16	3,069,460	1,329,702	18
Wastewater	51,773,472	19,014,235	26	3,385,522	1,277,925	18
Septic	14,691,823	2,884,977	4	0	0	0
Forest	40,420,398	11,341,009	15	1,986,235	958,433	13
Non-Tidal Water Deposition	1,730,198	305,472	1	90,010	27,434	1
All Sources	283,708,466	72,815,756	100	16,299,899	7,184,258	100

Proposed Federal Initiatives

On May 12, 2009 President Obama issued Executive Order 13508—Chesapeake Bay Protection and Restoration. The preamble to the Executive Order states that “despite significant efforts by Federal, State, and local governments and other interested parties, water pollution in the Chesapeake Bay prevents the attainment of existing State water quality standards and the “fishable and swimmable” goals of the Clean Water Act. At the current level and scope of pollution control within the Chesapeake Bay's watershed, restoration of the Chesapeake Bay is not expected for many years. The pollutants that are largely responsible for pollution of the Chesapeake Bay are nutrients, in the form of nitrogen and phosphorus, and sediment. These pollutants come from many sources, including sewage treatment plants, city streets, development sites, agricultural operations, and deposition from the air onto the waters of the Chesapeake Bay and the lands of the watershed.”

In documents related to the Chesapeake Bay TMDL, the Environmental Protection Agency has indicated possible “consequences” for the failure of states to achieve nutrient load reduction goals from all source sectors. These consequences include further reductions in point source nutrient allocations and the denial of new NPDES permits. Unfortunately, this approach would amount to shifting the burden onto the most successful sector—wastewater treatment plant point sources.

State Approach to Chesapeake Bay TMDL

Virginia, Pennsylvania, Maryland, and Washington, D.C. already have stringent regulations in place to limit nutrient loads to the Chesapeake Bay from wastewater treatment plant point source discharges. Most major wastewater treatment plants in Maryland and Virginia have either already upgraded to advanced nutrient removal technology, or are well into the design and construction phases of upgrades. The Virginia Department of Environmental Quality has indicated its intention to use existing point source regulations to implement the Chesapeake Bay TMDL, rather than making further reductions in wastewater treatment plant discharge allocations. This approach would be critical to providing a stable regulatory environment, protecting public investments, and accommodating sustainable economic growth.

Nutrient reduction from all sources are the key to achieving Chesapeake Bay water quality goals. It is widely acknowledged that existing programs, regulations, and funding sources are insufficient to achieve the necessary load reductions from the nonpoint sectors such as agriculture and atmospheric deposition. Implementation of the TMDL is likely to require new approaches for dealing with these sectors.

Agricultural Runoff Control Activities

The Food, Conservation and Energy Act of 2008 includes the Chesapeake Bay Watershed Conservation Program that allocates funds to “assist (agricultural) producers in implementing conservation activities on agricultural lands in the Chesapeake Bay Watershed, improve water quality and quantity through agreements with producers”. The allocation is \$23 million in FY2009, \$43 million in FY2010, \$72 million in FY2011, \$50 million in FY2012. These allocations are modest, but a commendable opportunity to fund conservation activities that result in reduced nutrient runoff from agricultural lands.

The agricultural sector presently has few incentives to request and expend the Chesapeake Bay Watershed Conservation Program funds. One approach discussed by congress would enable the agricultural sector to cooperate with owners of publicly-owned wastewater treatment facilities to develop cost-effective agricultural runoff controls, runoff reduction from agricultural lands. This approach could further enhance nutrient discharge reduction to the Chesapeake Bay.

Conclusion

To achieve Chesapeake Bay restoration, it is critical that all nutrient source sectors participate in efforts to reduce nutrient discharge. In Virginia, due to considerable expenditure by the Commonwealth of Virginia and by citizens of the Commonwealth, required nutrient reduction from wastewater treatment plants will be achieved within the next two to three years. Further nutrient reduction by this sector may not be technically feasible and will clearly not be cost effective.

Greater expenditure by the agricultural community, through the Chesapeake Bay Watershed Conservation Program fund, combined with agricultural sector cooperation with owners of publicly-owned wastewater treatment facilities, appear to be the greatest opportunity to achieve further near-term, cost effective nutrient reduction. This cooperative approach to nutrient reduction is consistent with the Chesapeake Bay TMDL.

Our agriculture sector is under as much financial stress as it has ever been under. '09 was terrible for the dairy sector; far below production cost. Beef farmers have at least \$100 less income per calf sold than last year and realistically that's below production and improvement cost. Poultry margins are fair at best and if you look at the infrastructure cost they don't exist.

Mandatory implementation of TMDL's-without common sense understanding of the aspects that present themselves daily in both animal and crop production-will destine a misunderstanding and distrust. My conditions at the western base of the Massanutten Mountains are quite different than the dairy farmer in Montezuma (that's here in Rockingham), much less than the corn and soybean grower in King George County. How will we individually be viewed?

Implementation of voluntary conservation practices has made tremendous significance in the reduction of run-off and general water quality. Cooperative efforts through the NRC Service, programs through the Department of Conservation and Recreation and Best Management Practices Cost Share programs have been effective.

In past years programs seemed to have been strictly written with little practical knowledge of how they could be implemented. I know-I investigated seriously about 8 years ago. I live on Mountain Valley Road-that should help understand my terrain-spring and winding stream configuration and odd field shape. The program must have been written for a nice flat-square cornered-straight stream- etc. location. Well, seven years later some flexibility and a private funded cost-share program came along and an effective clean-water project is in place.

My biggest fear is that there's a rush to create one set of rules for Rockingham, Clarke, Chesterfield and Middlesex counties and won't effectively fit any of these areas.

Effective implementation of practices is not financially possible without cost-share assistance. The front-end cost of compliance is just not feasible for most in today's agricultural market. If these programs are rushed, implementation mandated to all without a cooperative cost-share approach we are doomed to spotty compliance and vacant land.

Good agricultural land management can be accomplished with a cooperative effort of all our strength's and assets.

The idea that the 17 million people who live off the farms in the watershed and effectively will bear no individual responsibility will be made whole by the 87,000 farms in the watershed who try their damndest to supply the cleanest, safest, best and cheapest food supply in the world is short-sighted.

Please have the foresight to work with the agricultural diversity of each locality and maintain a cooperative and cost-share assistance in the implementation of improvements.

I hope you don't feel the same rush to judgment that's going on in our health care system. The last thing we need is a poorly thought thru and written "Program" that requires more time interpreting, revising, and correcting than a practical implementation "Program" seeking cooperation.

Bob Threewitts